Table S-1: ΔR/R response of a detector array to various analytes at $P/P^o = 0.009$.[a]

analyte	D_1	D_2	D_3	D_4	D_5	D_6	D_7	D_8	D_9	D_{10}	D_{11}	D_{12}	D_{13}
octylamine	0.6951	0.0037	0.4497	0.3971	0.3958	0.3090	0.6377	0.0597	0.0274	0.0234	0.0141	0.0199	0.0162
	(0.1914)	(0.0013)	(0.0905)	(0.1428)	(0.0378)	(0.1028)	(0.1357)	(0.0252)	(0.0053)	(0.0069)	(0.0015)	(0.0014)	(0.0021)
butylamine	0.6356	0.0375	0.7557	0.2832	0.3879	0.2797	0.7123	0.3387	0.0765	0.0647	0.0484	0.0348	0.0449
	(0.0215)	(0.0060)	(0.0329)	(0.0140)	(0.0208)	(0.0388)	(0.0918)	(0.0223)	(0.0098)	(0.0023)	(0.0018)	(0.0017)	(0.0027)
isobutylamine	0.1824	0.0028	0.2014	0.3945	0.0815	0.2063	0.2756	0.1741	0.0272	0.0310	0.0097	0.0124	0.0096
	(0.0423)	(0.0012)	(0.0407)	(0.0304)	(0.0079)	(0.0227)	(0.0650)	(0.0213)	(0.0044)	(0.0010)	(0.0006)	(0.0007)	(0.0004)
propylamine	0.6948	0.1595	1.1902	0.7359	0.3942	0.3345	0.7142	0.4307	0.0683	0.0521	0.0248	0.0221	0.0228
	(0.1301)	(0.0212)	(0.2889)	(0.0848)	(0.0436)	(0.0358)	(0.1193)	(0.0316)	(0.0077)	(0.0014)	(0.0008)	(0.0007)	(0.0006)
ethylamine	0.2710	0.0371	0.6018	0.1829	0.3175	0.1839	0.8872	0.2234	0.0424	0.0206	0.0138	0.0159	0.0147
	(0.0067)	(0.0037)	(0.0449)	(0.0076)	(0.0179)	(0.0137)	(0.0812)	(0.0142)	(0.0054)	(0.0005)	(0.0002)	(0.0007)	(0.0004)
methylamine	0.0725	0.0937	0.1104	0.1381	0.0905	0.1218	0.1666	0.1737	0.0515	0.0167	0.0154	0.0115	0.0125
	(0.0043)	(0.0103)	(0.0046)	(0.0070)	(0.0026)	(0.0087)	(0.0093)	(0.0079)	(0.0072)	(0.0011)	(0.0010)	(0.0007)	(0.0008)
triethylamine	0.0582	0.0011	0.2526	0.0232	0.1552	0.0407	0.1897	0.0770	0.0139	0.0209	0.0117	0.0107	0.0181
	(0.0016)	(0.0002)	(0.0135)	(0.0011)	(0.0087)	(0.0027)	(0.0172)	(0.0058)	(0.0020)	(0.0004)	(0.0002)	(0.0004)	(0.0011)
dimethylamine	0.1301	0.0310	0.3462	0.2280	0.1955	0.1447	0.4067	0.1128	0.0347	0.0156	0.0126	0.0136	0.0141
	(0.0047)	(0.0036)	(0.0266)	(0.0167)	(0.0113)	(0.0108)	(0.0423)	(0.0086)	(0.0049)	(0.0006)	(0.0005)	(0.0010)	(0.0007)

trimethylamine	0.0444	0.0045	0.1505	0.0661	0.0816	0.0430	0.1087	0.0341	0.0053	0.0081	0.0037	0.0050	0.0045
	(0.0010)	(0.0004)	(0.0100)	(0.0041)	(0.0076)	(0.0047)	(0.0139)	(0.0021)	(0.0006)	(0.0002)	(0.0001)	(0.0003)	(0.0003)
pyridine	0.0396	0.0015	0.1087	0.0085	0.0755	0.0086	0.0872	0.0082	0.0128	0.0132	0.0076	0.0056	0.0166
	(0.0019)	(0.0005)	(0.0094)	(0.0006)	(0.0042)	(0.0009)	(0.0095)	(0.0005)	(0.0019)	(0.0007)	(0.0002)	(0.0003)	(0.0014)
methylaniline	0.0062	0.0018	0.0311	0.0100	0.0211	0.0074	0.0250	0.0081	0.0046	0.0020	0.0024	0.0015	0.0045
	(0.0004)	(0.0006)	(0.0033)	(0.0004)	(0.0013)	(0.0008)	(0.0067)	(0.0007)	(0.0007)	(0.0002)	(0.0001)	(0.0001)	(0.0002)
aniline	0.0201	0.0008	0.1044	0.0041	0.0797	0.0032	0.0675	0.0042	0.0237	0.0119	0.0057	0.0041	0.0117
	(0.0007)	(0.0003)	(0.0096)	(0.0002)	(0.0098)	(0.0005)	(0.0047)	(0.0004)	(0.0038)	(0.0003)	(0.0001)	(0.0004)	(0.0005)
water	0.0099	0.0019	0.0529	0.0036	0.0599	0.0035	0.0337	0.0054	0.0078	0.0053	0.0026	0.0020	0.0048
	(0.0004)	(0.0003)	(0.0047)	(0.0001)	(0.0193)	(0.0002)	(0.0034)	(0.0003)	(0.0013)	(0.0002)	(0.0000)	(0.0002)	(0.0001)
ethanol	0.0059	0.0019	0.0279	0.0054	0.0175	0.0051	0.0538	0.0027	0.0018	0.0008	0.0009	0.0010	0.0023
	(0.0003)	(0.0005)	(0.0028)	(0.0008)	(0.0016)	(0.0008)	(0.0177)	(0.0008)	(0.0002)	(0.0001)	(0.0000)	(0.0001)	(0.0002)
toluene	0.0023	0.0009	0.0117	0.0023	0.0078	0.0033	0.1243	0.0014	0.0023	0.0046	0.0032	0.0016	0.0049
	(0.0001)	(0.0003)	(0.0015)	(0.0004)	(0.0010)	(0.0005)	(0.0987)	(0.0004)	(0.0003)	(0.0003)	(0.0002)	(0.0001)	(0.0002)

[a] Data in the parentheses are the standard deviation of the response with values based on three exposures to three nominally identical detectors. D_1 to D_{13} represent detectors made from carbon black composites of: DAB-AM-16/DBSA, DAB-AM-16/MSA, DAB-AM-32/DBSA, DAB-AM-32/MSA, DAB-AM-64/DBSA, DAB-AM-64/MSA, PAMAM 3.5/DBSA (at protonation ratio of 1:0.5), PAMAM 3.5/MSA (at protonation ratio of 1:0.5), poly (ethylene oxide), poly (styrene-co-isoprene), poly (ethylene-co-vinyl acetate), polymethyloctadecylsiloxane and ethyl cellulose, respectively. All DAB-AM dendrimer/acid detectors listed were at a protonation ratio of 1:1.